

MEMO THRU: Chief, GeoEnv Sec
Cost Eng Sec

23 August 2001

TO: James Kendall (Cost Eng Sec)

SUBJECT: Asbestos Inspection Reports for F-22 Beddown Facility, Langley AFB, Virginia

1. Attached please find two (2) copies of a 15 Aug 01 letter (Encl 1) from Marine Chemist, regarding pipe insulation in the hangar of Building 754. Also attached are two (2) copies of the Amended Asbestos Inspection Report for Building 756 (Encl 2), which describes the sampling of the high ceiling in July. These documents are self-explanatory.
2. Please also refer to the two (2) copies of the subject reports for Building 756 and for the abandoned steam line trenches/vaults, which I delivered to you (plus a copy to George Gogel), on 23 May 2001. Also recall that I gave to you, on 05 June, the 3-1/2" disk containing those reports in electronic format. Please refer to the General Notes and figures on pages 13 through 21 of the report for Building 756.
 - Comment #32, states that various types of doors are present, but doors were not sampled, due to the destructive nature of the required sampling effort. The recommendation, similar to those made in the reports for Buildings 754 and 755, is that any existing insulated doors should be assumed to be asbestos containing, until determined otherwise. Considering the time and cost for sampling each door, and the numerous different types and styles of doors, we recommend against sampling to determine the extent of asbestos containing materials. Instead, we recommend that the AE quantify the doors on the demolition drawings, and state that they are to be removed and disposed of as asbestos containing materials. For budgeting purposes, we recommend an estimated disposal cost of \$30 per door. Please note that the table on page 11 does not include estimated quantities/costs for asbestos containing materials in insulated doors.
 - Please take note of Comment #33, which states that a vault area was not accessible for survey and inspection, and therefore costs related to potential ACM are not included.
 - Please be aware that, per General Note #37 on page 16, the sketches are not to scale. Note that the blueprints provided by Mr. Verser were useful as a general layout, but could not be utilized for this report due to the many alterations within the building.
 - The Floor Plans shown at pages 18 and 19 (not numbered) are for Building 756, not 755 as shown.

Please refer to the General Notes and figures on pages 5 through 8 of the report for the steam line trenches/vaults.

- As described by the Inspector, much of the insulation has apparently fallen off of the pipes, and is now mixed with water and soil in essentially a thick slurry form, a few inches deep, along the bottom of the trenches/vaults. For estimating quantity of ACM, we recommend assuming that all pipes are (or were at one time) insulated with ACM for their entire lengths. Relatively speaking, we expect the cost to gain physical access to the pipes and insulating materials, will be higher than the ACM collection/disposal costs, estimated to be in the range of \$20 per lineal foot of trench.
3. Also attached to this memo are two (2) copies of a crude site map (Encl 3), obtained from the BCE, depicting the approximate alignment of the subject abandoned steam lines, including locations of Trenches 1, 2, and 3 referred to in the report. This is the only information that could be garnered on the subject.
 4. Should you have any questions, please call at x7098, drop by, or e-mail me.

Randall C. Born, P.E.

Randall C. Born, P.E.
GeoEnv Sec

Encls

CC: George Gogel

Marine
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FDA

State Water
Control Board
(SWCB)

Program
(Hull Thickness)
PAT
(Asbestos, Metals)
ELPAT (Lead)
NVLAP
(Bulk Asbestos)
(Sewage)
NPDWR
(Drinking Water)
(Resin)
(Metals in
Ceramicware)
NPDES (Water
and Wastewater)

August 15, 2001

US Army Corps. Of Engineers
803 Front Street
Norfolk, VA 23510-1096

Attention: Mr. Randy Born

Reference: Langley Air Force Base
Building 754
Hampton, VA

Dear Mr. Randy Borne

On July 24, 2001 Marine Chemist Service has conducted an investigation of the pipe insulation located on the street side of the hanger building 754. Please be advised that two of the three pipes contain fiberglass insulation. One of the two fiberglass insulated pipes has two mudded elbows. This mudded material tested positive in similar materials during a previous survey. However, these mudded elbows were not included with quantities of asbestos material. The third pipe has insulation that tested positive for asbestos and quantities were included in the previous survey.

If you have any questions, please do not hesitate to contact us.

Sincerely,

Angela Malleano

Asbestos Inspector VA License # 002382

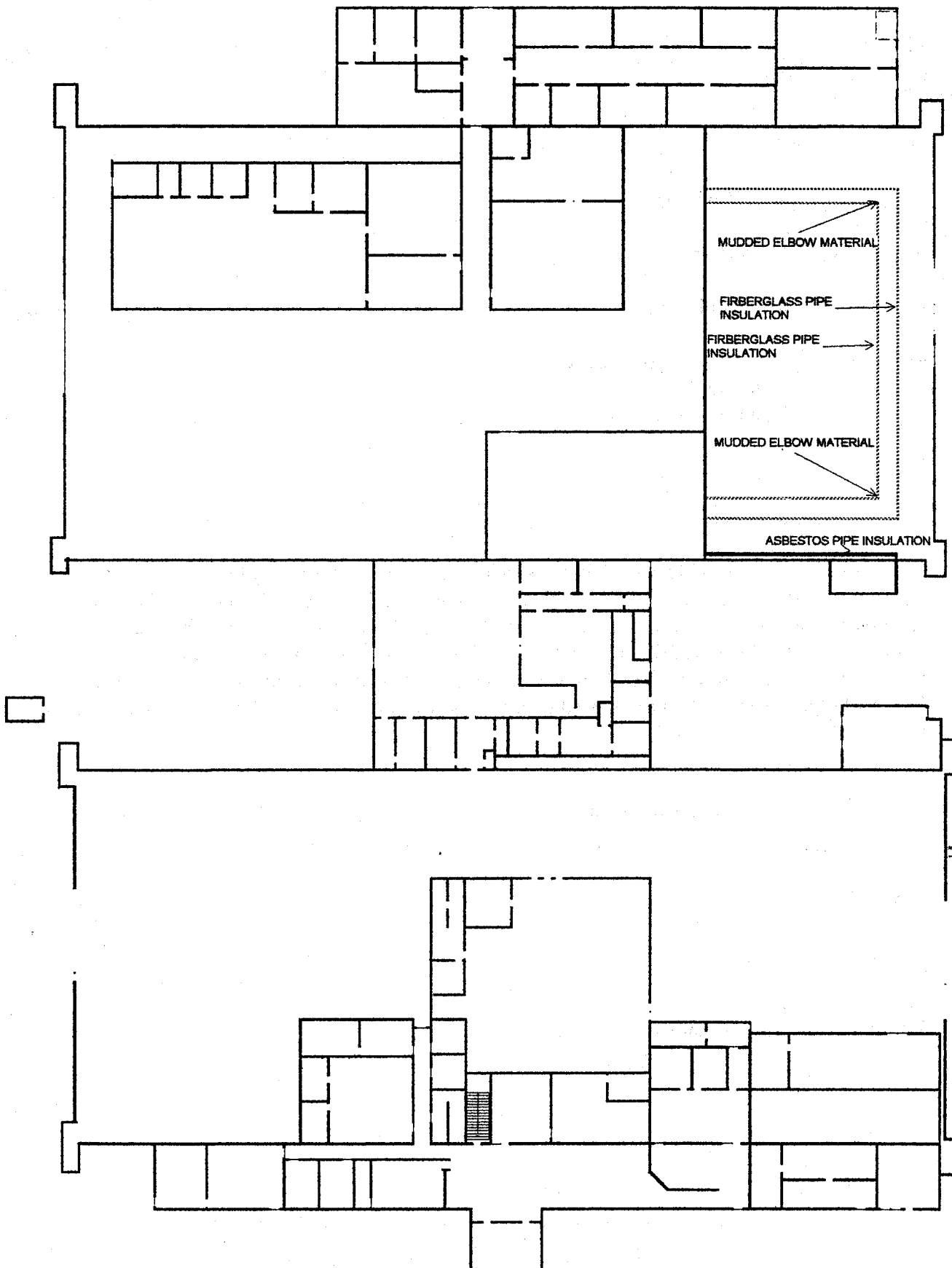
Enclosures

DESCRIPTION OF SAMPLING CONDITIONS, CALCULATIONS OF AIR CONCENTRATIONS,
AND TWA EXPOSURES ARE BASED UPON INFORMATION AS PROVIDED TO THE LABORATORY.

SAMPLING, ANALYSIS, CONSULTING, WRITTEN PLANS / SPECIFICATIONS AND TRAINING CLASSES
SPECIALIZING IN ASBESTOS, LEAD, PCB, HAZARDOUS WASTE, PETROLEUM AND WATER
CERTIFIED MARINE CHEMIST AND INDUSTRIAL HYGIENIST INSPECTIONS
DEIONIZED WATER SUPPLY & ANALYSIS • ION-EXCHANGE RESIN SALES, REGENERATION & ANALYSIS
NONDESTRUCTIVE TESTING • COPPUS VENTILATION SALES

Encl 1

LANGLEY AIR FORCE BASE
BUILDING 754
HAMPTON, VA
AMENDED SAMPLE LOCATIONS



AMENDED

ASBESTOS INSPECTION REPORT

**FOR
LANGLEY AIR FORCE BASE
BUILDING 755
HAMPTON, VA 23665**

Prepared for:
Mr. Randy Born
US Army Corps. Of Engineers
PO Drawer 65490
Norfolk, VA

Prepared by:
Angela Mulleano
Asbestos Inspector #002382
Marine Chemist Service, Inc.
11850 Tug Boat Lane
Newport News, VA 23606

Encl 2

ASBESTOS INSPECTION

Background and Purpose

There has been a growing public awareness of the link between the inhalation of asbestos fibers and various diseases such as asbestosis, mesothelioma, lung and other cancers. As a result, the Asbestos Hazard Emergency Response Act (AHERA 40 CFR Part 763), was established.

The necessary components of an AHERA inspection require the accredited inspector to visually inspect and assess the condition of all known or assumed friable asbestos-containing building materials (ACBM); to visually inspect non-friable ACBM and touch it to determine friability, and to identify homogeneous areas of friable materials.

The National Emission Standards for Hazardous Air Pollutants (NESHAPS) require thorough inspections for asbestos in structures before the renovation or demolition of those structures.

In order to comply with NESHAPS, buildings to be renovated or demolished must be thoroughly inspected for asbestos containing building materials. Marine Chemist Service, Inc. follows the AHERA sampling protocol for interior surveys and the old Virginia standard for roof surveys.

In compliance with Virginia Regulations, Marine Chemist Service Inc. performed an partial asbestos inspection of the ceiling tiles located in the south side hanger of Building 755, Langley Air Force Base, Hampton, VA. On July 24, 2001 for the US Army Engineer District, Norfolk, VA. The results of this inspection are as follows:

Document Review and On-Site Survey

1. Due to the unavailability of necessary equipment. No samples were taken of the ceiling tiles located at the south side of hanger. There are three opening in the hanger ceiling with 2x4 (12'x20') white ceiling tiles measuring approximately 720 sq. ft. Because no analytical results are possible, the ceiling tiles and any other potential suspect material are considered asbestos, until sampling is conducted to positively identify.
2. Blueprints were provided for the inspection; however, sketches were made of current floor plan at the time of the survey to indicate sample/asbestos material locations.

Visual Inspection

A visual inspection was performed on the ceiling tile materials found in the survey areas.

Bulk Sampling

Bulk sampling was performed on suspected asbestos-containing ceiling tiles found in the south side hanger of building 755 and the minimum numbers of samples were taken.

Bulk samples were taken penetrating all layers of the material. The samples were at least 1 cubic centimeter and were placed in a sealed container at the time of collection. All precautions were taken to prevent exposure to those present in or around the facility during the collection of samples.

All sampling locations were patched with an encapsulant after the sampling was complete.

The minimum number of samples was taken for distinct type of suspect asbestos material.

Samples listed below are grouped into homogeneous areas. Homogeneous areas are areas that are uniform by color, texture, construction/application date and general appearance.

Some sample results in the % asbestos column may be displayed in this report with a slash between two numbers, (#/#). The first number represents the first material listed under the material location/description and the second number represents the second material listed.

When N/A is placed in the friable category, it means the sample tested negative - (0) or less than one percent - ($\leq 1\%$) for asbestos and the friable description does not apply.

Samples were analyzed utilizing Polarized Light Microscopy (PLM) with dispersion staining. The results are as follows:

SAMPLE NO.	MATERIAL LOCATION/DESCRIPTION	% ASBESTOS	Y/N FRIABLE
755-1	2x4 white ceiling tile at hanger door	0%	N/A
755-2	2x4 white ceiling tile in center of hanger	0%	N/A
755-3	2x4 white ceiling tile patch in center of hanger	0%	N/A

Comments

1. On July 24, 2001, Marine Chemist Service conducted a partial inspection of these 2x4 ceiling tiles located at the south side of hanger 755 to positively identify. This ceiling tile material tested negative for asbestos. These ceiling tiles were included in the previous survey as asbestos suspect material and were considered asbestos. The quantities of this ceiling tile material were also included in the estimated of the previous survey. This estimated should be excluded from the previous survey

Previous survey

Estimated Quantities of Asbestos Materials

<u>ASBESTOS CONTAINING MATERIALS</u>	<u>QUANTITY</u>	<u>COST PER UNIT</u>	<u>REMOVAL COST</u>
Stems pipes insulation and mudded elbows	691 linear ft.	\$ 40.00	\$ 27,640.00
Wood panel adhesives	22812 sq. ft.	\$ 0.10	\$ 2,281.20
Linoleum's	1748 sq. ft.	\$ 2.00	\$ 3,496.00
All floor tiles and adhesives	13662 sq. ft.	\$ 2.00	\$ 27,324.00
Old adhesive on plaster walls	Unknown	\$ 2.00	\$ 00.00
Roof coating materials	37760 sq. ft.	\$ 3.00	\$ 113,280.00
Roof sealer materials	728 sq. ft.	\$ 2.00	\$ 1,456.00
Roof cement materials	1214 linear ft.	\$ 8.00	\$ 9,712.00
White sealer materials	252 sq. ft.	\$ 8.00	\$ 2,016.00
Red siding material	5113 sq. ft.	\$ 1.00	\$ 5,113.00
2x4 white ceiling tiles	720 sq. ft.	\$ 2.00	\$ 1,440.00
Total Estimate			\$ 193,758.20

Should be excluded from previous estimated.



Certification

The contractor for the survey of Building 755 of Langley Air Force Base, Hampton VA was:

**MARINE CHEMIST SERVICE, INC.
11850 Tug Boat Lane
Newport News, Virginia 23606**

The team leader responsible for quality control coordination of inspections and adherence to inspection protocols is:

**Colleen Becker CIH
MARINE CHEMIST SERVICE, INC.
11850 Tug Boat Lane
Newport News, Virginia 23606**

The inspector who physically inspected the building and who has received EPA-Approved training is:

**Angela Mulleano
VA Asbestos Inspector License
002380**

The AIHA and NVLAP Accredited laboratory selected to analyze the bulk samples for asbestos content by PLM, using the "Interim Method for the Determination of Asbestos in Bulk Insulation Samples (Appendix A to Subpart F in 40 CFR Part 763) was:

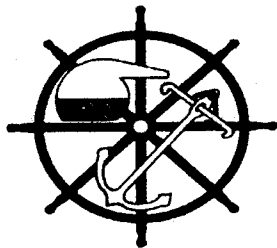
**MARINE CHEMIST SERVICE, INC.
11850 Tug Boat Lane
Newport News, Virginia 23606**

GENERAL LEGEND

- O Sample number/location - non asbestos
- Δ Sample number/location - contains asbestos

GENERAL NOTES

1. On July 24, 2001, Marine Chemist Service conducted a partial inspection of these 2x4 ceiling tiles located at the south side of hanger 755 to positively identify. This ceiling tile material tested negative for asbestos. These ceiling tiles were included in the previous survey as asbestos suspect material and were considered asbestos. The quantities of this ceiling tile material were also included in the estimated of the previous survey. This estimated should be excluded from the previous survey.
2. Sample locations are approximate.
3. The sketches are not to scale



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Newport News, Virginia 23606
(757) 873-0933 – Fax (757) 873-1074

Customer:

U.S Army Corp. of Engineers
Attention: Randy Born
803 Front Street
Norfolk, VA 23510

Lab Report No 35498 Amended

Date July 31, 2001

Sample Description:

Langley Air Force Base, Building 755
Job No. 00-041S

Method of Analysis:

EPA 600/R-93/116 Method for the
Determination of Bulk Asbestos

REPORT OF ANALYSIS

- (1) Sample #755-1, 2x4 White Ceiling Tile at Hanger Door.
Macroscopic: (1) 100% of this sample is beige, fibrous and particulate material with paint.
Microscopic: (1) The fibrous portion of this sample consists of non-asbestiform materials (i.e. 40% cellulose, 30% mineral wool). The remaining 30% of this sample is non-fibrous material.
Total Asbestos Percentage = No Asbestos Detected.
- (2) Sample #755-2, 2x4 White Ceiling Tile at Center of Hanger.
Macroscopic: (1) 100% of this sample is beige, fibrous and particulate material.
Microscopic: (1) The fibrous portion of this sample consists of non-asbestiform materials (i.e. 40% cellulose, 30% mineral wool). The remaining 30% of this sample is non-fibrous material.
Total Asbestos Percentage = No Asbestos Detected.
- (3) Sample #755-3, 2x4 White Ceiling Tile Patch at Center of Hanger.
Macroscopic: (1) 100% of this sample is beige, fibrous and particulate material.
Microscopic: (1) The fibrous portion of this sample consists of non-asbestiform materials (i.e. 40% cellulose, 30% mineral wool). The remaining 30% of this sample is non-fibrous material.
Total Asbestos Percentage = No Asbestos Detected.

NOTE: SAMPLES TAKEN BY LABORATORY 7/24/01. TEST REPORT RELATES ONLY TO THE ITEMS TESTED.

- This report shall not be reproduced by the client, except in full, without the written approval of this laboratory.
- This report must not be used by the client to claim product endorsement by NVLAP or the U.S. Government.
- Due to the inhibiting matrix of non-friable organically bound (NOB) samples and the possibility of asbestiform minerals being present in a size (<5um) undetectable by PLM in some materials, MCS may suggest the analysis by TEM for samples such as floor tiles, caulking, roofing, etc.

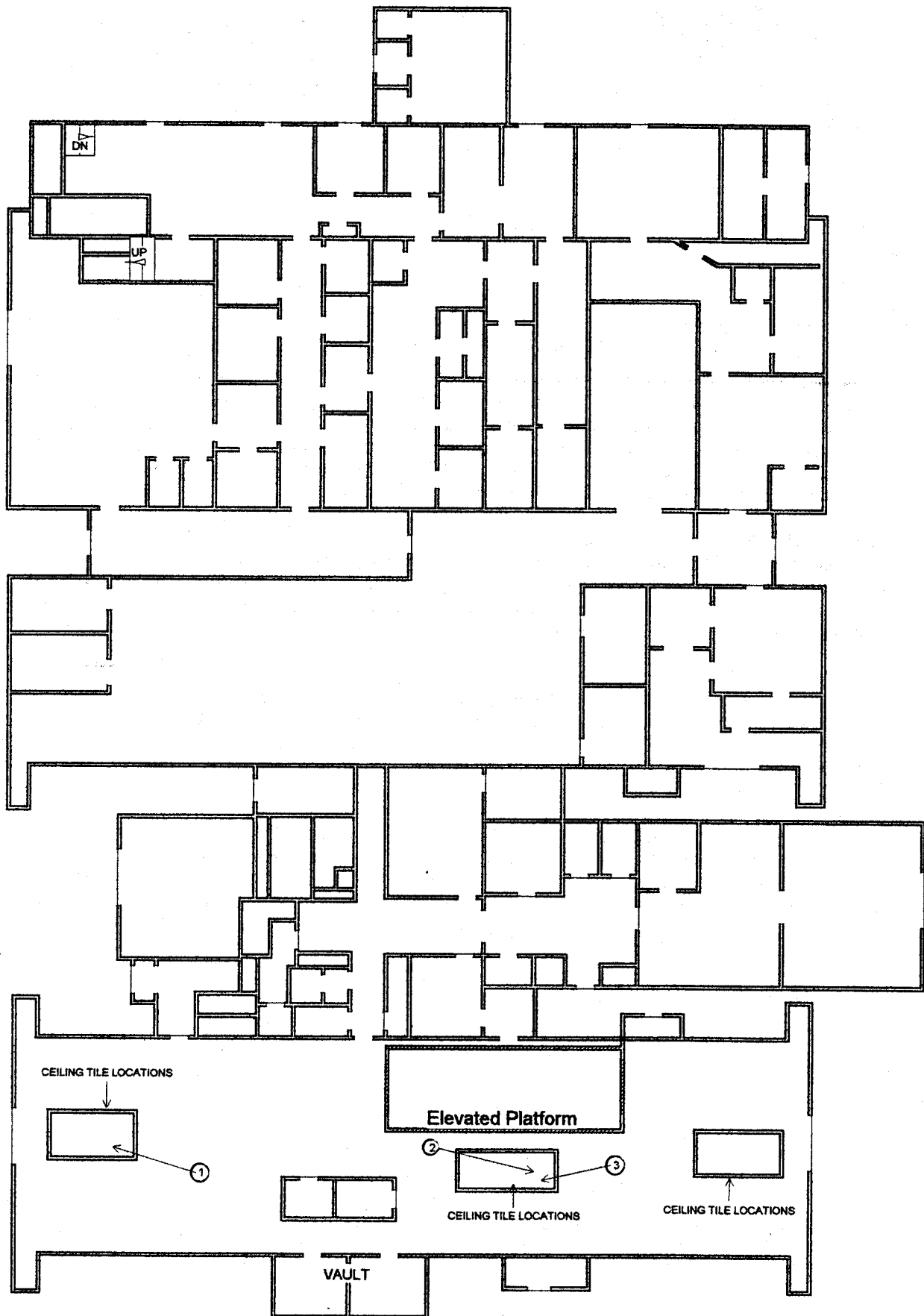
Method Detection Limit =<1%.

SIGNED: 
CHEMIST

Page 1 of 1

LANGLEY AIR FORCE BASE
BUILDING 755 HAMPTON, VA
AMENDED FLOOR PLAN

NOT TO SCALE



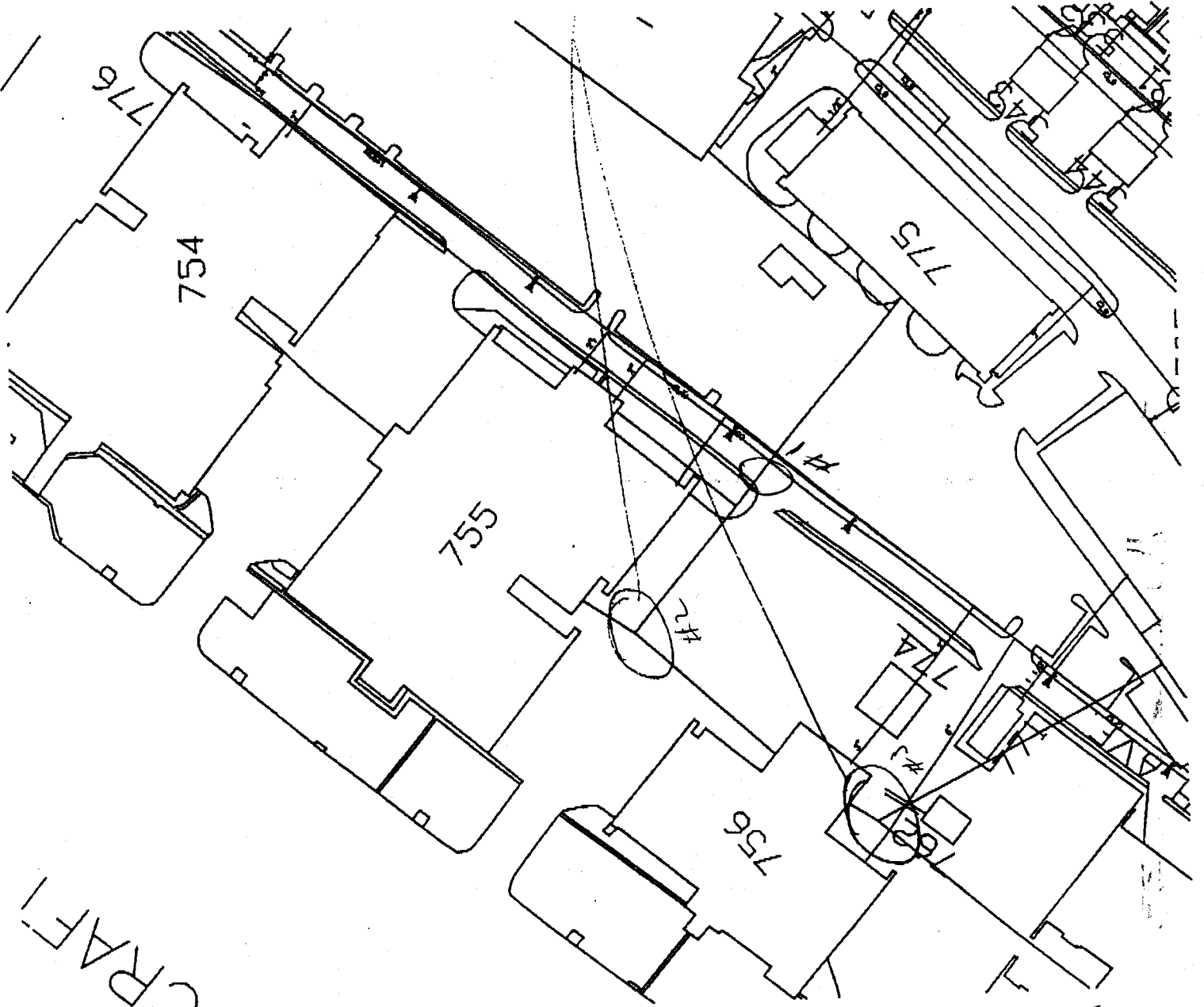
Lt. Mingula

Shops - Doug Hagemeyer

Assumed points of access

Gary's Copy

Estimated steam (heating)
line routing



Encl 3

CRAFT